

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A portable information device comprising:
initialization data transmitting means for transmitting initialization data to an access point connected to a home networking system including a bridge configured to change the protocol between a high-speed network for connecting electronic device devices and a low-speed network for connecting home appliances, wherein a plurality of the electronic devices and the home appliances are configured to function as hyper text transfer protocol (HTTP) servers, and are accessible from the portable information device by a uniform resource locator (URL);
response data receiving means for receiving response data responsive to said initialization data from said access point; and
operational information transmitting means for transmitting information used to operate a home appliance or electronic device connected to said home networking system after said response data receiving means receives said response data.

2. (Canceled)

3. (Currently Amended) An access device connected to a home network and serving as an access point to permit access to said home network from a portable information device, said access device comprising:

a network interface for providing access to a home network including a bridge configured to change the protocol between a low-speed network for connecting home appliances and a high-speed network for connecting electronic devices, said network interface operating to communicate with each of said home appliances and electronic devices, wherein a plurality of the electronic devices and the home appliances are configured to function as hyper text transfer protocol (HTTP) servers, and are accessible from the portable information device by a uniform resource locator (URL);

a portable information device interface for communicating with said portable information device; and

control means for negotiating with said portable information device via said portable information device interface, said control means configured to provide conversion of transmission rates and protocols to enable said portable information device to communicate with said home network,

wherein data can be transmitted between said portable information device and each of said low-speed network for connecting home appliances and high-speed network for connecting electronic devices through said portable information device interface and said network interface after the negotiation by the control means.

4. (Previously Presented) An access device according to Claim 3, wherein said control means includes:

validation means for validating the data received from said portable information device interface,

determination means for determining whether the data includes an initialization packet after the data is validated,

building means for building a new initialization packet when the data is determined to include an initialization packet, and

outputting means for outputting the new initialization packet to said portable information device interface.

5. (Previously Presented) An access device according to Claim 3, wherein said control means includes analysis means for analyzing data received from said portable information device and delivers the data to said network interface after a protocol conversion.

6. (Previously Presented) An access device according to Claim 3, wherein said control means includes:

determining means for determining whether data received from said network interface is valid for accessing said portable information device,

building means for building a transfer packet, and

outputting means for outputting the transfer packet to said portable information device interface when the data is determined to be valid.

7. (Currently Amended) A home network system comprising:

a bridging element configured to provide conversion of formats of messages and character codes, and to exchange address structures;

a home network including a bridge configured to change the protocol between a low-speed network for connecting home appliances and a high-speed network for connecting electronic devices;

a portable information device connectable to said home network in a wireless manner; and

an access point for reciprocal data communication between said low-speed network for connecting home appliances and said high-speed network for connecting electronic devices and said portable information device, said,

wherein said home network includes a bridge configured to change the protocol of data sent between said low-speed network and said high-speed network, and

wherein said portable information device performs negotiation with said access point to gain access to said home network; and

wherein a plurality of the electronic devices and the home appliances are configured to function as hyper text transfer protocol (HTTP) servers, and are accessible from the portable information device by a uniform resource locator (URL).

8. (Previously Presented) A home network system according to Claim 7, wherein said portable information device transmits to said access point the data used to select a home appliance or an electronic device from among a plurality of said home appliances and electronic devices after said negotiation.

9. (Currently Amended) A method for accessing a home network, comprising:

receiving from a portable wireless information device a request for accessing information used to designate home appliances and electronic devices included in said home network including a bridge configured to change the protocol between a low-speed network for connecting home appliances and a high-speed network for connecting electronic devices which provides conversion of formats of messages and character codes, and enables exchange of address structures, wherein a plurality of the electronic devices and the home appliances are configured to function as hyper text transfer protocol (HTTP) servers, and are accessible from the portable wireless information device by a uniform resource locator (URL);

recognizing, upon receipt of the request for access, a URL address for designating home appliances or electronic devices with which said portable wireless information device will communicate; and

enabling exchange of data between the low-speed network connecting home appliances or high-speed network connecting electronic devices designated by said address and said portable wireless information device by providing conversion of

transmission rates and protocols to enable communication between said home appliances and electronic devices connected to said home network and said portable information device.

10. (Currently Amended) A method for accessing a home network, comprising:

transmitting a request for accessing information used to designate home appliances or electronic devices included in said home network to an access point connected to said home network including a bridge configured to change the protocol between a low-speed network connecting home appliances and a high-speed network connecting electronic devices;

providing conversion of transmission rates and protocols to enable communication between said home appliances and electronic devices connected to said home network and a portable information device, wherein a plurality of the electronic devices and the home appliances are configured to function as hyper text transfer protocol (HTTP) servers, and accessible from the portable information device by a uniform resource locator (URL);

transmitting URL address information used to designate home appliances or electronic devices included in said home network; and

transmitting operational information used to operate said home appliances or electronic devices.